

XCHECK

A PLATFORM FOR BENCHMARKING XML QUERY ENGINES

L. Afanasiev, M. Franceschet, M. Marx, E. Zimuel
Informatics Institute, University of Amsterdam, The Netherlands

Introduction

Benchmarks allow to assess systems' capabilities and help determine their **strengths** or potential **bottlenecks**. There are two main reasons to benchmark an XQuery engine:

1. **correctness check**: does the output of the engine conform to the standard?
2. **relative performance testing**: how well does the engine perform, in terms of processing speed and memory use, compared to other engines?

Motivation

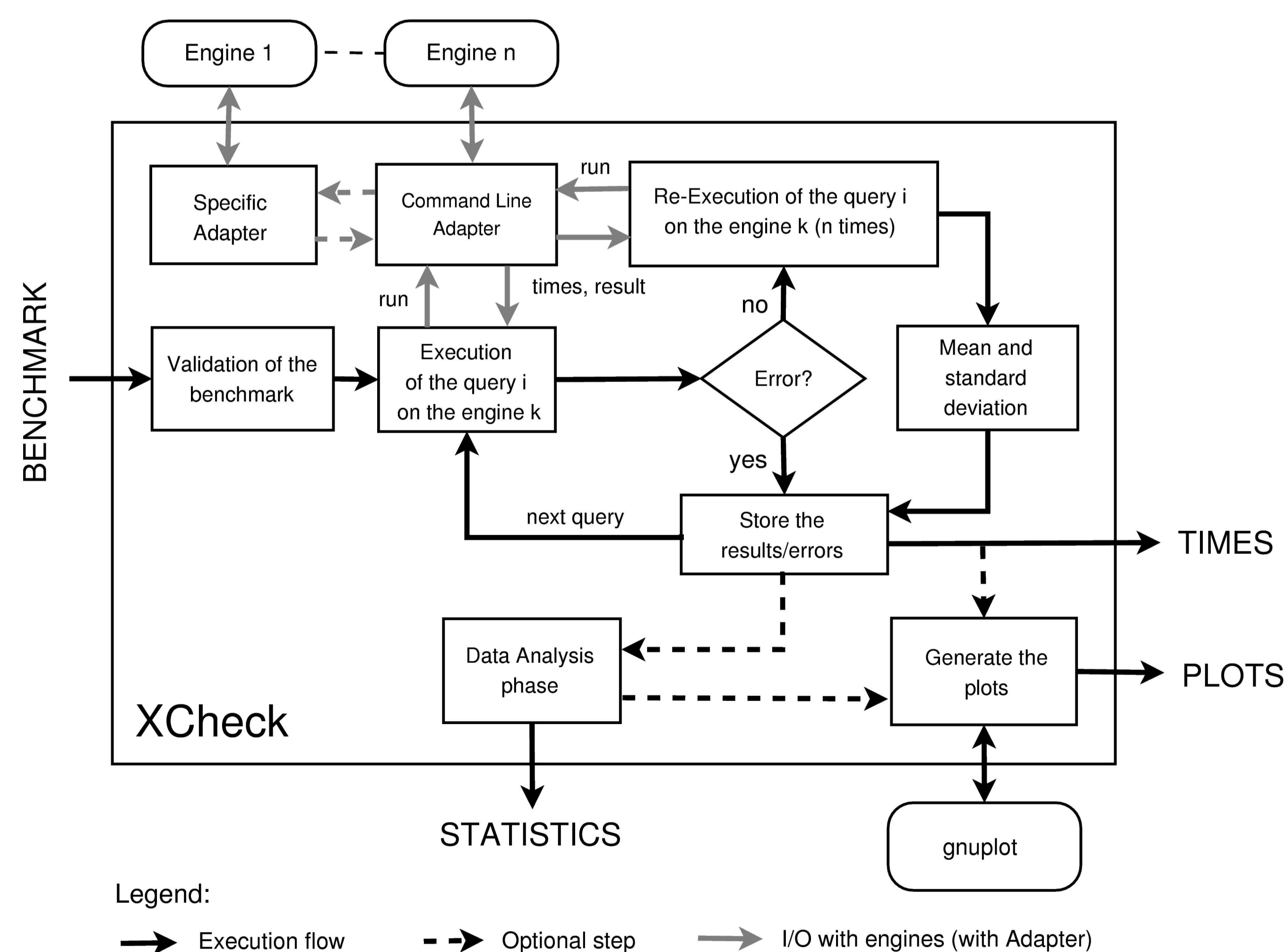
Running a benchmark by hand is **tedious** and **time consuming**. Moreover, it generates a **huge amount of raw data** that is difficult to interpret. A benchmarking tool, like XCheck, is useful for:

- **developers** to evaluate the correctness and performance of their processors;
- **researchers** to empirically test their ideas;
- **users** to compare and choose the best query engine.

The architecture

XCheck allows to run a benchmark on different engines and helps the comparison of the engines' performance by **presenting** the evaluation outcomes in different formats (tables, plots, rankings) and **aggregating** them in several ways.

The main idea behind the design of XCheck is that a user can learn a lot by **comparing the performance** of different engines on many benchmarks.



Running XMark benchmark with XCheck

